

7075 1.5x1.5

647-7814
REV. A
B159552

Work Order ID 159552

Wednesday, April 12, 2017 3:51:00 PM

159552

Page 1

Item ID: 647.7814 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Fwd Bracket
 Start Date: 4/16/2017 Start Qty: 6.00 *6* Cust Item ID:
 Required Date: 5/5/2017 Req'd Qty: 6.00 *6* Customer:
 Reference: SCHEDULED/S

Approvals: Process Plan: DAS 21 Date: APR 13 2017 Tooling: _____ Date: _____ Run Start *NR1*
 QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.7800	A

100	BAND SAW	0.00
100		
Bandsaw	Memo	0.01
Jeaspa Bandsaw	Cut Blanks at 4.625"	

118.5

5 0 P17-042

110	HAAS CNC VERTICAL MACHINING #1	0.11
110		
HAAS 1	Memo	2.28
HAAS CNC vertical machine #1	1-Machine per folio FB241	

DWG REV: A
 FOLIO REV: AA

2- deburr and break all sharp edges

5 0 K7 17-04-23 / 17-04-23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐							

Work Order ID 159552

Wednesday, April 12, 2017 3:51:00 PM

159552

Page 2

Item ID: 647.7814 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
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Start Date: 4/16/2017 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 5/5/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120	QC2- Inspect parts off machine FAI/FAIB	0.00							
-----	---	------	--	--	--	--	--	--	--

120

QC

Memo

0.06

Quality Control

A. 17-04-23

5

0

DAS
08
9-89

130	QC8- Inspect parts - second check	0.00							
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130

QC

Memo

0.12

Quality Control

5

0

DAS
49
9-89

17/04/25

140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
-----	---	------	--	--	--	--	--	--	--

140

Outsource4

Memo

1,080.00

Outsource process - Anodize

Issue P/O to ATG : 30166

1- Black Anodize as per Dwg 647.7800

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Comformity is required

5

MAY 02 2017

DAS
13
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Work Order ID 159552

Wednesday, April 12, 2017 3:51:00 PM

159552

Page 3

Item ID: 647.7814 Accept ***N900040100*** Setup Start ***NS1***
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Required Date: 5/5/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150	Receive & Inspect for Damage & Mat'l Certs	0.00							
-----	--	------	--	--	--	--	--	--	--

150

Packaging

Memo

0.12

Packaging

5x 5017-6-9

160	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

160

QC

Memo

0.12

Quality Control

2.3 mils thickness primer5DAS
38
9-89
JUN 13 2017

180	Identify as per dwg & Stock Location. <u>CK114</u>	0.00							
-----	--	------	--	--	--	--	--	--	--

180

Packaging

Memo

0.06

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

5

JUN 14 2017

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

Work Order ID 159552

Wednesday, April 12, 2017 3:51:00 PM

159552

Page 4

Item ID: 647.7814 Accept ***N900040100*** Setup Start ***NS1***
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Start Date: 4/16/2017 Start Qty: 6.00 ***6*** Cust Item ID:
Required Date: 5/5/2017 Req'd Qty: 6.00 ***6*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21 - Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.60							
Quality Control									

DAS
21
9-89

JUN 14 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐	
Design ☐		Operator ☐		Bending ☐		Set-up ☐	
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐	
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐	
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐	
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐	
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐	
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐	
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____			
Misidentified ☐		Past Due ☐					

Picklist Print

Wednesday, April 12, 2017 3:50:59 PM

Page 1

Work Order ID: 159552

159552

Parent Item: 647.7814

647 7814

Parent Item Name: Fwd Bracket

Start Date: 4/16/2017

Required Date: 5/5/2017

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV A RQ 13/12/23 VERIFIED BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B1.500X1.500		Purchased	No			100	f	13.4350	0.385	2.431579			

M7075T6B1 500X1 500

7075 T6 BAR 1.500 x 1.500

Location	Loc Qty	Loc Code
MAT006	13.43501	
M135248	0.00001	
M136289	1.395	
M136945	12.04	

~~0.0001~~
1.395
2.353
17-04-20

3.5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐						OTHER : _____	

1 2 3 4 5 6 7 8

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PRODUCTION RELEASE PER		NC
2	INITIAL RELEASE	12-21-09	P. BRAVO
3	INCORPORATED ECH 03128, 04407 & 05325	03-02-10	P. BRAVO

NOTES:

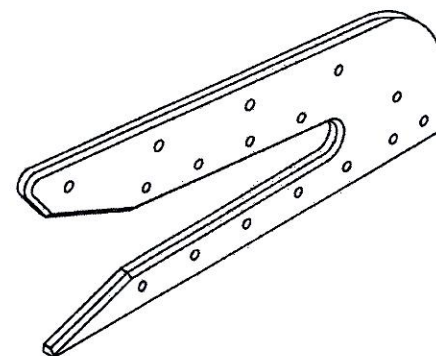
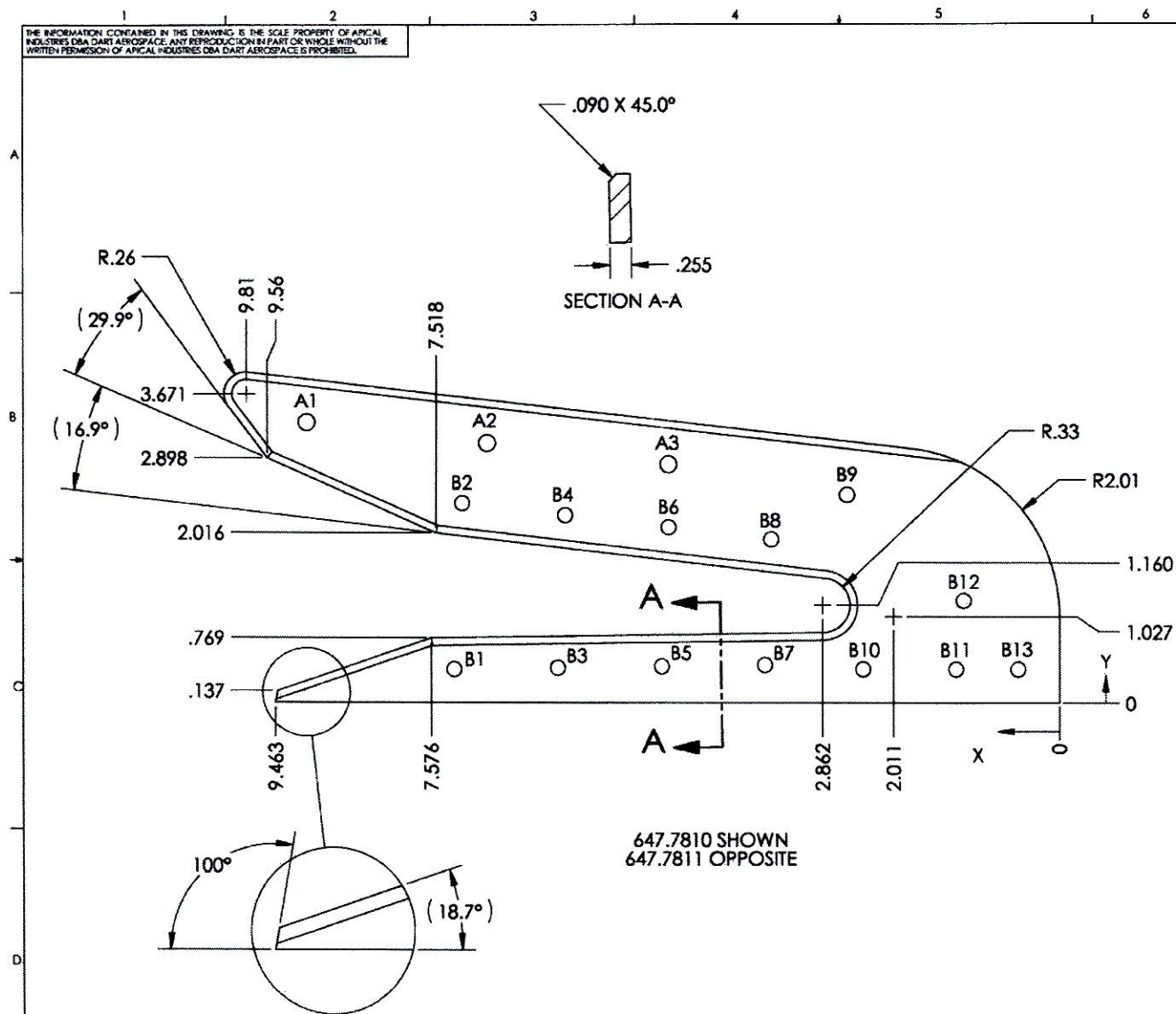
- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH IAW MPP-172 SECTION 3.3 & 4.3.
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 159552 MJS

1704-13

		647.7823	CROSS BRACKET AFT	△	△
		647.7822	EYE BOLT FITTING RH	△	△
		647.7821	EYE BOLT FITTING LH	△	△
		647.7820	CROSS BRACKET AFT	△	△
		647.7819	CROSS BRACKET FWD	△	△
		647.7818	MOUNTING CHANNEL	△	△
		647.7817	AFT BRACKET	△	△
		647.7816	AFT BRACKET	△	△
		647.7815	FORWARD BRACKET	△	△
		647.7814	FORWARD BRACKET	△	△
		647.7813	CENTER PLATE LOWER	△	△
		647.7812	CENTER PLATE UPPER	△	△
		647.7811	BRACKET B	△	△
		647.7810	BRACKET A	△	△
	F/N	PART #	DESCRIPTION	MAT'L	SPEC
QTY		PARTS LIST			
NEXT ASSY (S)		ORIGINAL DATE 11-05-09 DRAWN BY: E. ANDERSON DRAWING APPROVAL: P. BRAVO CHECKED BY: P. BRAVO CONTRACT NO.			DART AEROSPACE APICAL INDUSTRIES, INC. (650) 541-1 AEROSPACE
647.7300		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ± .5°			
		BRACKET			3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300
		SIZE	CAGE CODE	DWG. NO.	REV. A
		B	07M26	647.7800	
		SCALE NONE			SHEET 1 OF 10

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647.7810
647.7811 OPPOSITE

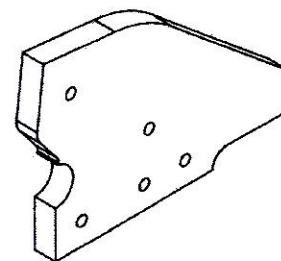
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A2	6.906±.002	3.083±.002	Ø.201 THRU
A3	4.720	2.835±.002	Ø.201 THRU
B1	7.300±.002	.397±.002	Ø.177 THRU
B2	7.203±.002	2.369±.002	Ø.177 THRU
B3	6.050±.002	.415±.002	Ø.177 THRU
B4	5.961±.002	2.228±.002	Ø.177 THRU
B5	4.800±.002	.433±.002	Ø.177 THRU
B6	4.719±.002	2.088±.002	Ø.177 THRU
B7	3.550	.450	Ø.177 THRU
B8	3.476	1.947	Ø.177 THRU
B9	2.575	2.475	Ø.177 THRU
B10	2.380	.400	Ø.177 THRU
B11	1.250	.400	Ø.177 THRU
B12	1.160	1.220	Ø.177 THRU
B13	.500	.400	Ø.177 THRU

647.7810 SHOWN
647.7811 OPPOSITE

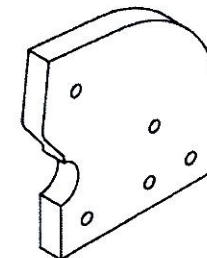
ORIGINAL DATE 11-05-09	 DART AEROSPACE AERONAUTICAL INDUSTRIES INC. 8001 DART AEROSPACE	3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)724-5300	
DRAWN BY: J. COOPER			
CHECKED BY: J. ANDERSON			
DRAWING APPROVAL: P. BRAVO 11-10-09			
CONTACT: kg	BRACKET		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	SIZE: 1/2" (CAGL CODE)	DWG. NO. 647.7800	REV. A
1. HOLE DIA. 1/2"	2. 070262		
3. HOLE DEPTH 2.00"			
4. FLANGES 1.00" DIA.			
5. SCALE NONE			
		SHEET 2 OF 10	

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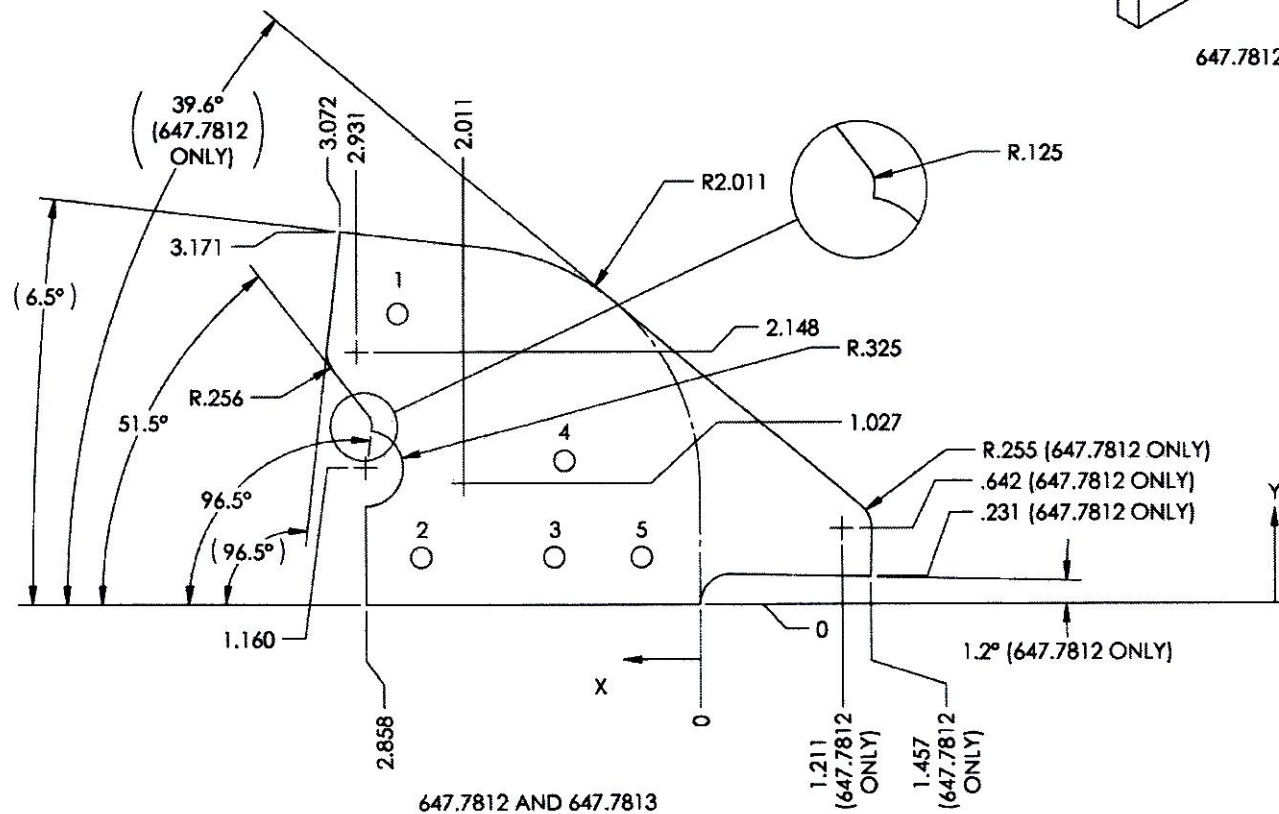
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2	2.380±.002	.400±.002	Ø.177 THRU
3	1.250±.002	.400±.002	Ø.177 THRU
4	1.160±.002	1.220±.002	Ø.177 THRU
5	.500±.002	.400±.002	Ø.177 THRU



647.7812



647.7813



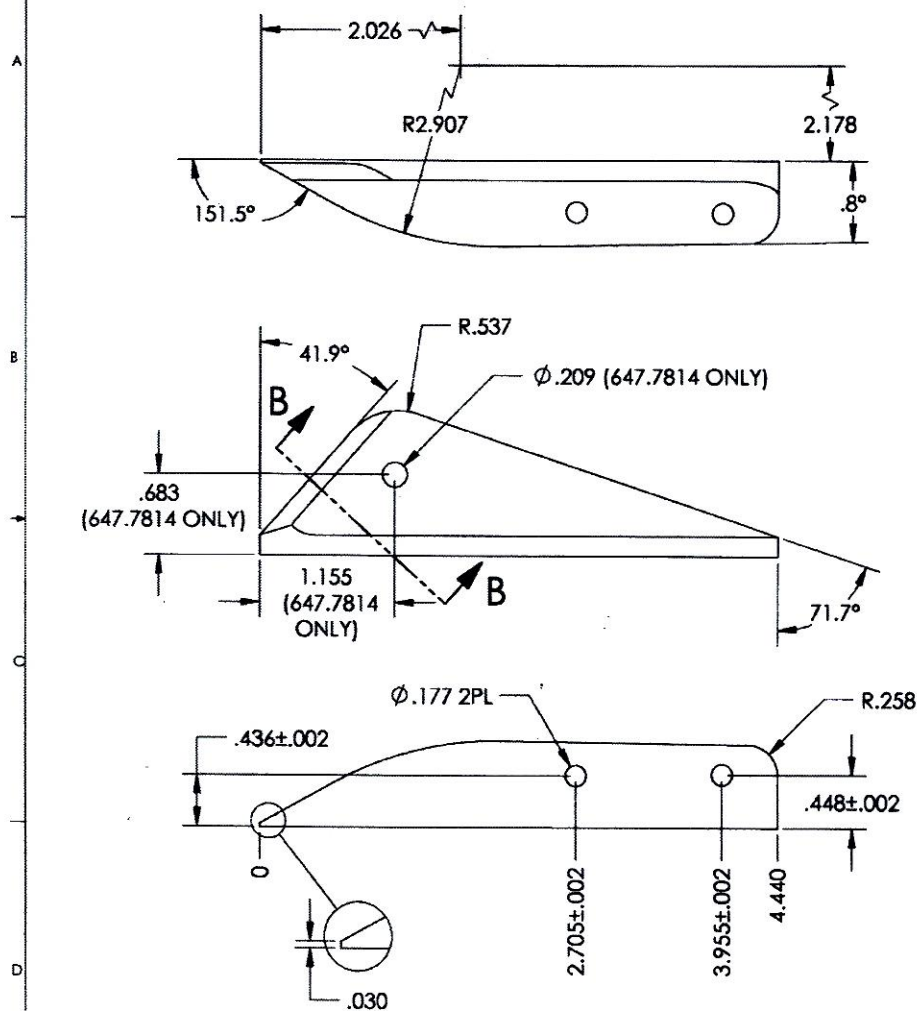
647.7812 AND 647.7813



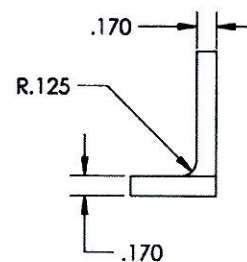
.375±.002

ORIGINAL DATE 11-09-09		3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY E ANDERSON		DART AEROSPACE APICAL INDUSTRIES INC. 9800 DART AEROSPACE	
CHECKED BY P BRAY		BRACKET	
DRAWING APPROVAL DATE CONTRACT NO.		REV. A	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ±.5°		SIZE B	CAGE CODE 079426
SCALE NONE		DWG NO. 647.7800	SHEET 3 OF 10

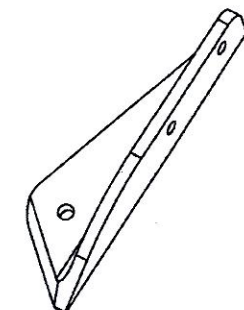
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



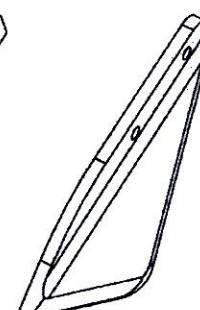
647.7814 SHOWN
647.7815 OPPOSITE



SECTION B-B



647.7814

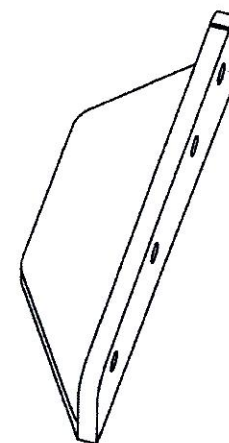
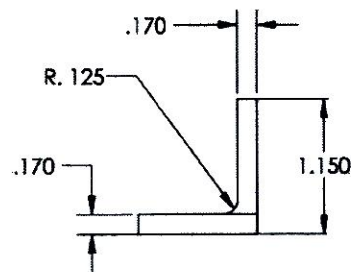
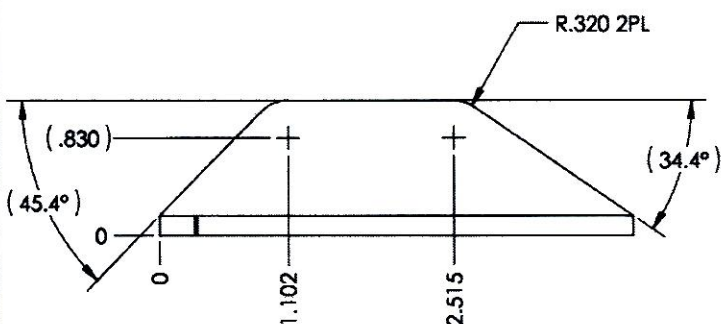
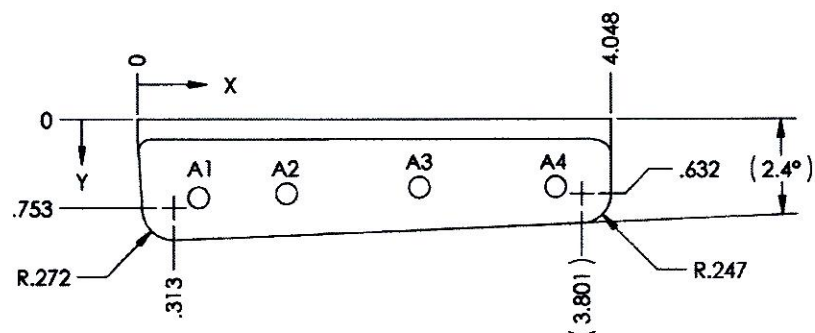


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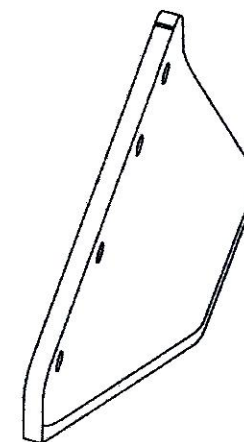
ORIGINAL DATE 11/05/05	3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300
DRAWN BY E. ANDERSON	CHECKED P. BRAVO
DESIGNED BY P. BRAVO	APPROVED BY J. LUTZ
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 3 PLACE DECIMALS .005 ANGLES ± .5°	
REV B	CAGE CODE 07M26
SCALE NONE	DWG. NO. 647.7800
	REV. A
	SHEET 4 OF 10

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TAG	X LOC	Y LOC	SIZE
A1	.527±.002	.666±.002	Ø .177 THRU
A2	1.276±.002	.631±.002	Ø .177 THRU
A3	2.404±.002	.578±.002	Ø .177 THRU
A4	3.576±.002	.573±.002	Ø .177 THRU



647.7816

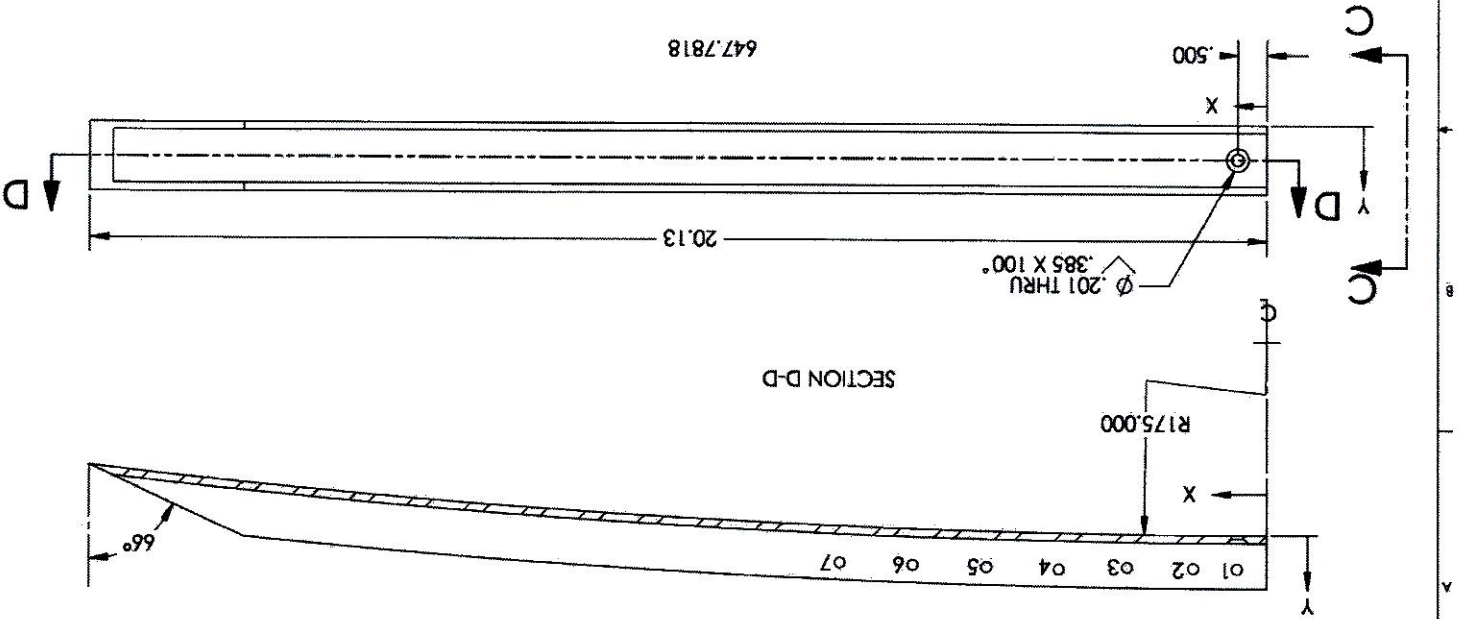


647.7817

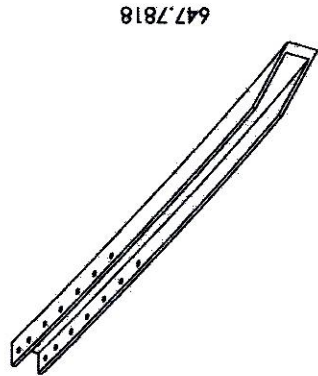
647.7816 SHOWN
647.7817 OPPOSITE

ORIGINAL DATE 11-08-09		3030 ENTERPRISE CT. SUITE A VISTA, CA, 92081 (760)-724-5300	
DRAWN BY I. ANDRISCH		CHECKED BY P. SALVO	
DRAWING APPROVAL P. SALVO		APICAL INDUSTRIES INC. DBA DART AEROSPACE	
CONTRACT NO.		BRACKET	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV. B 07/02/06	REV. A
SCALE: NONE		SHEET 5 OF 10	

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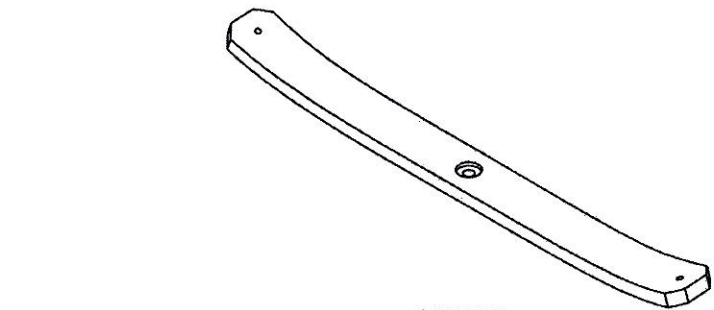
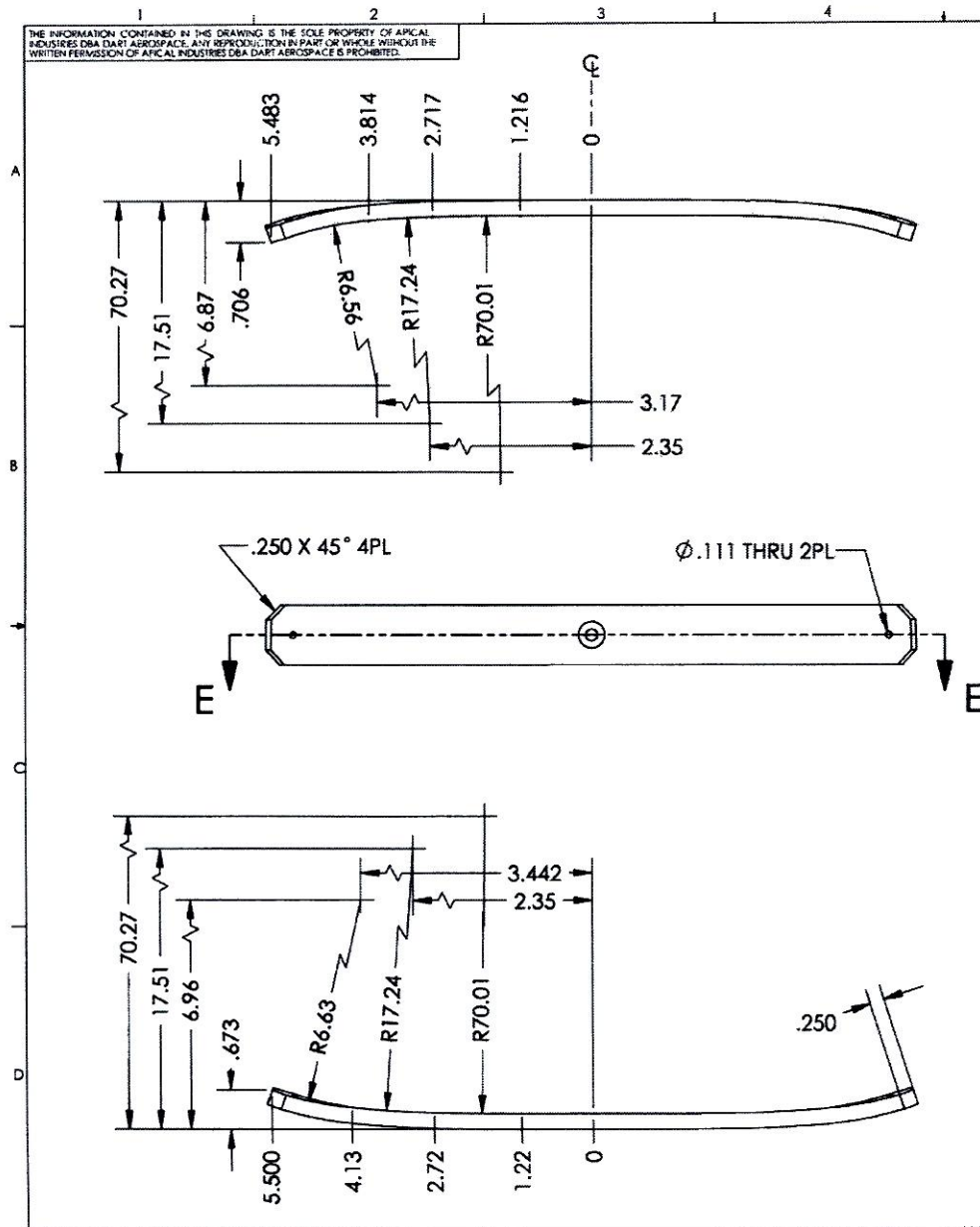
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2	1.2566.002	5666.002	Ø 1.177 THRU
3	2.3866.002	5492.002	Ø 1.177 THRU
4	3.5572.002	5812.002	Ø 1.177 THRU
5	4.8064.002	5446.002	Ø 1.177 THRU
6	6.0556.002	5072.002	Ø 1.177 THRU
7	7.3054.002	4704.002	Ø 1.177 THRU



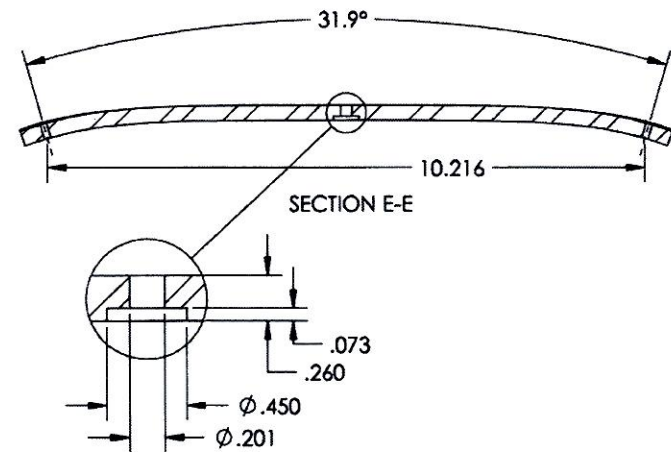
3030 ENTERPRISE CT.
SUITE A
VISTA, CA 92081
TEL: (619) 724-5300
FAX: (619) 724-5300
BRACKET
REV: A
DATE: 07/12/25
SCALE: NONE
SHEET: 6 OF 10

DESIGNED BY: E. ANDERSON
CHECKED BY: E. ANDERSON
DATE: 07/12/25
APPROVED BY: E. ANDERSON
DATE: 07/12/25
UNITED STATES PATENT & TRADEMARK OFFICE
REGISTERED DESIGN PATENT
NO. 8,071,225
ISSUED: 07/12/25

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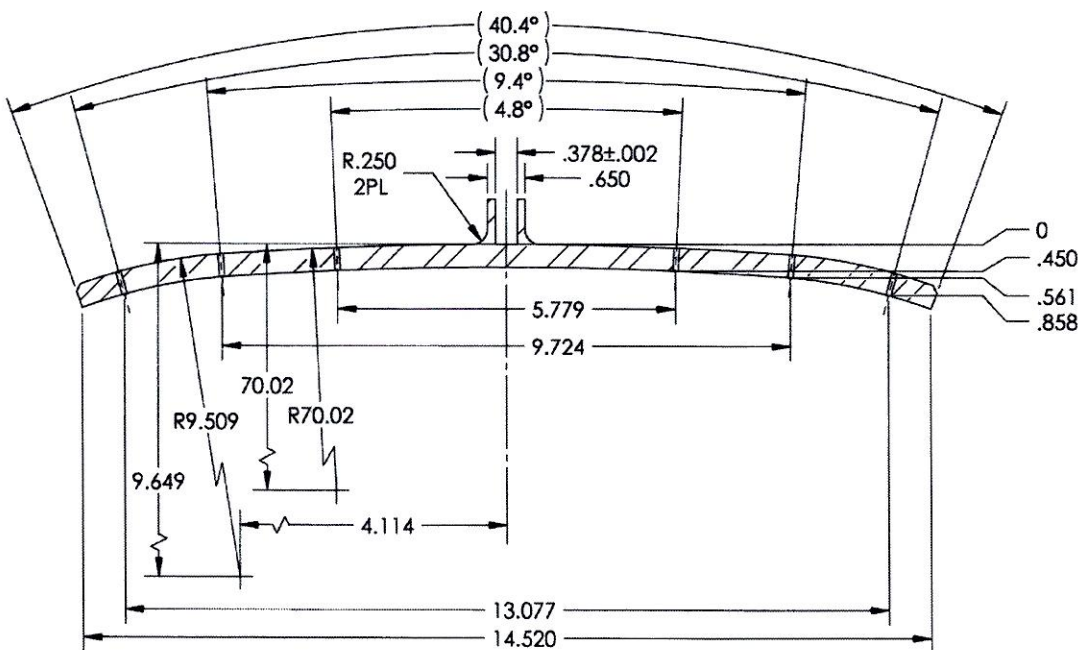
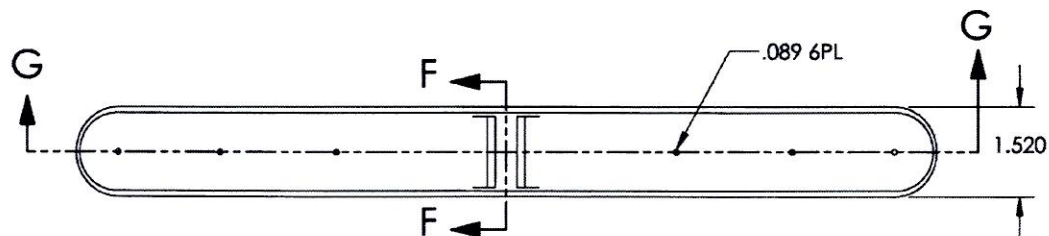


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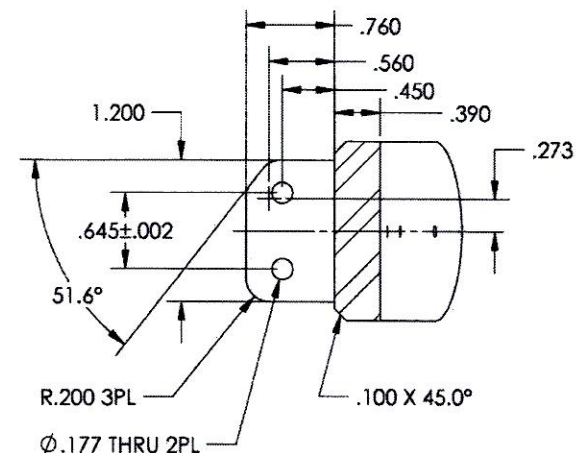
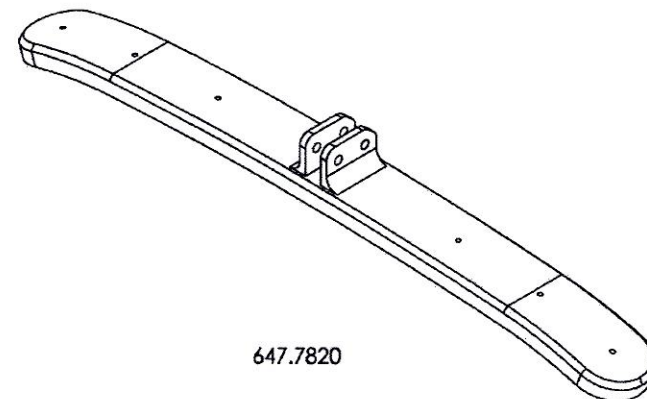


ORIGINAL DATE 11/05/04	DART 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760) 724-5300		
DRAWN BY E. ANDERSON	APICAL INDUSTRIES, INC. DBA DART AEROSPACE		
CHECKED BY P. BRAY	BRACKET		
DATE 11/10/04	SCALE NONE		
CONTRACT NO.	SHEET 7 OF 10		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .001 3 PLACE DECIMALS .0005 ANGLES .5°		SER CAGE CODE B 07MZ6	REV A
		DWG. NO. 647.7800	

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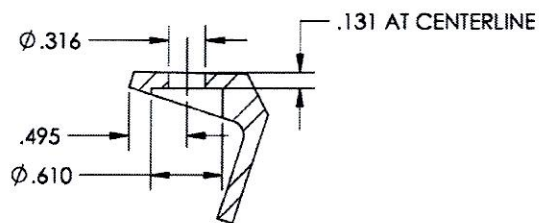
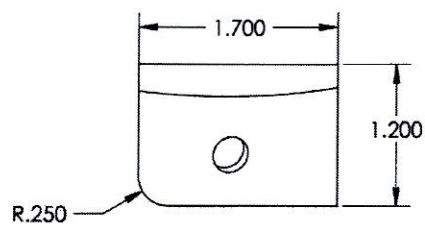
SECTION G-G



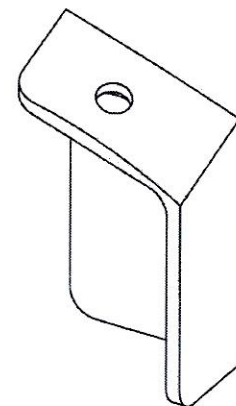
SECTION F-F

ORIGINAL DATE 1/15/09	DART AEROSPACE	3030 ENTERPRISE CT., SUITE A VISTA, CA, 92081 (760)-724-5300
DRAWN BY E. ANDERSON	CHECKED R. BRAVO	APICAL INDUSTRIES, INC. DBA DART AEROSPACE
DESIGNED BY E. BRAVO	APPROVED BY E. BRAVO	BRACKET
CONTRACT NO.		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°	THE CASE CODE B 07M26	DWG. NO. 647.7800
	SCALE NONE	REV. A
		SHEET 8 OF 10

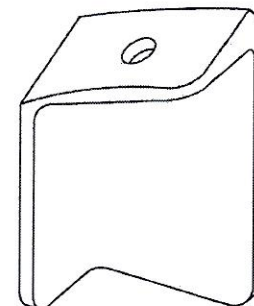
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



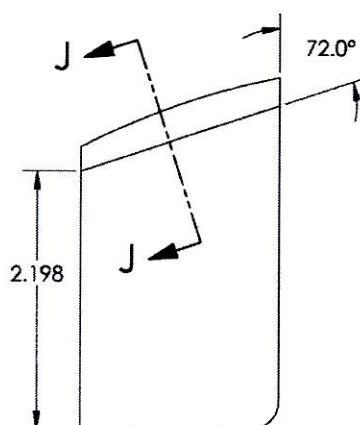
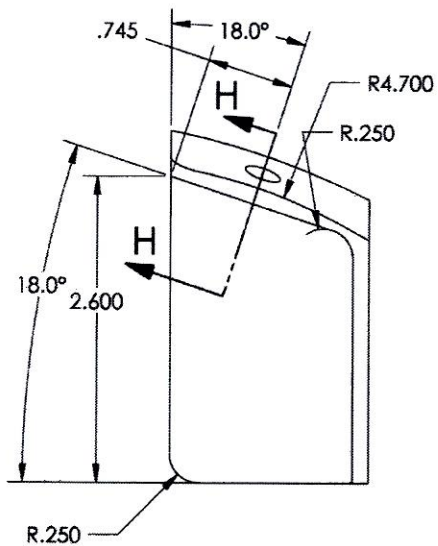
SECTION H-H



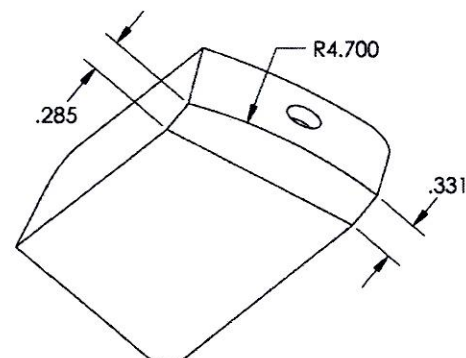
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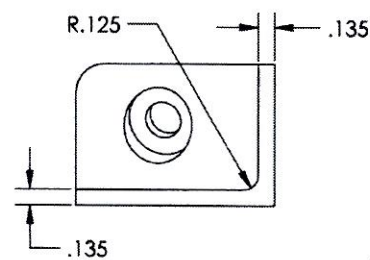
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SECTION J-J



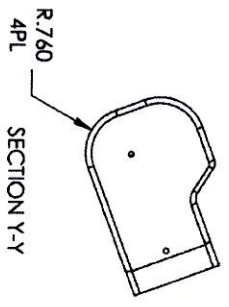
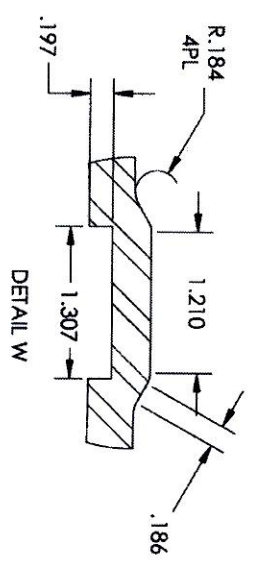
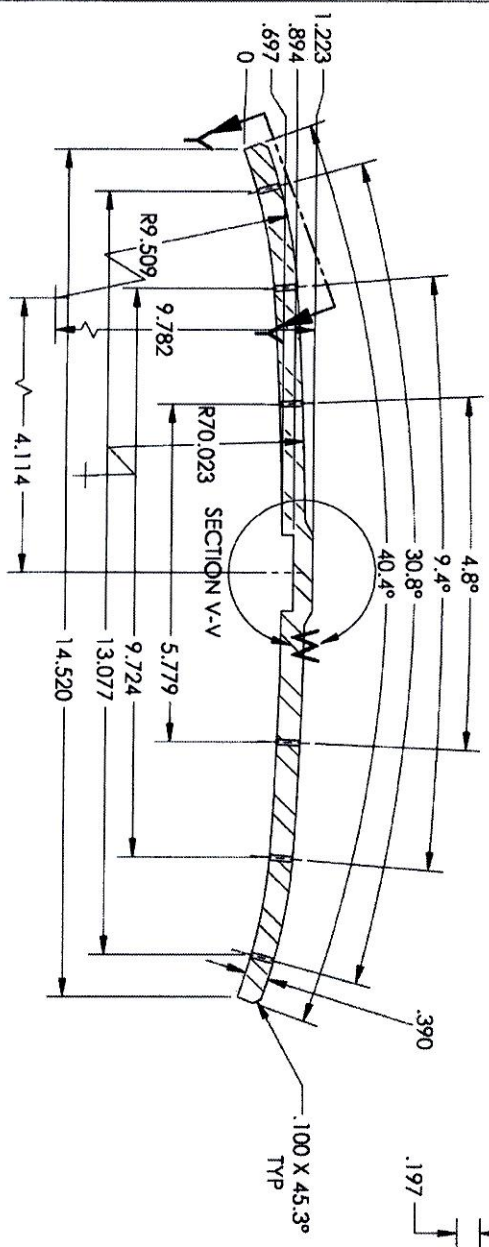
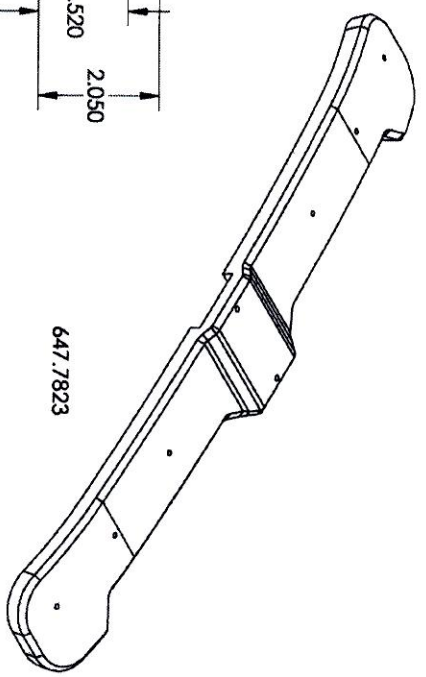
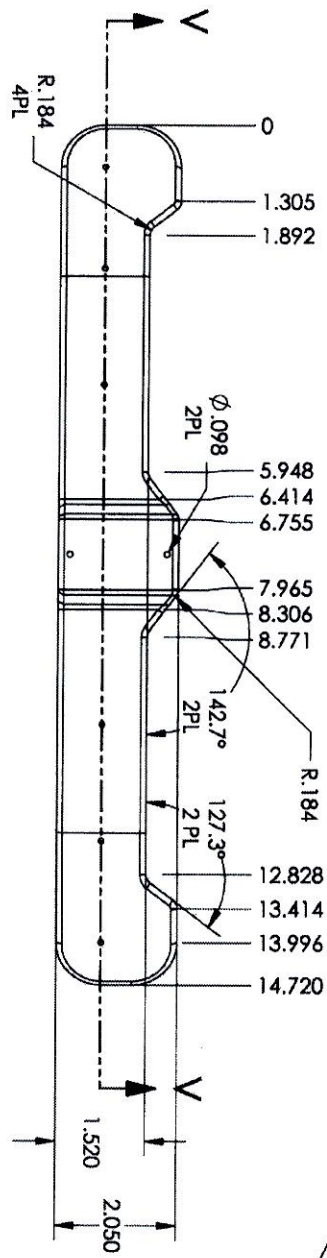
SECTION K-K



647.7821 SHOWN
647.7822 OPPOSITE

ORIGINAL DATE: 11/10/09		3030 ENTERPRISE CT., SUITE A	
DRAWN BY: E. ANDERSON / P. BRAYO		VISTA, CA 92081	
DRAWING APPROVAL: [Signature]		(760)-724-5300	
CONTRACT NO.		BRACKET	
SEE: CADA CODE: B	DWG. NO: 07M26	REV. A	647.7800
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: 2 PLACE DECIMALS ±.01; 3 PLACE DECIMALS ±.005; ANGLES ±.5°		SCALE: NONE	SHEET: 9 OF 10

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ORIGINAL DATE: 11/14/00 DRAWN BY: J. ANDERSON CHECKED BY: J. ANDERSON DESIGNED BY: J. ANDERSON DATE: 11/14/00 SCALE: NONE		DART 3030 INTERPRET CT. SUITE A 7000 AERCAL INDUSTRIES INC. WILSON, NJ 07094 (781) 274-5500	
PART NUMBER: 647.7800 SCALE: NONE SHEET: 10 OF 10		BRACKET	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER
Purchase Order ID PO36166

Purchase Order Date 5/2/2017
PO Print Date 5/24/2017

Page Number 9 of 11

Order From:

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To: DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

VENDOR'S TRUCK

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

25 159558

✓ 647.7813 CENTER
PLATE REV. A

6/16/2017

6.00

\$8.75

\$52.50

Yes

6/16/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total:

\$52.50

26 159552

✓ 647.7814 BRACKET
REV. A

6/16/2017

5.00

\$6.85

\$34.25

Yes

6/16/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total:

\$34.25

27 159551

✓ 647.7817 BRACKET
REV. A

6/16/2017

6.00

\$6.85

\$41.10

Yes

6/16/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377 TYPE I CLASS N

Line Total:

\$41.10

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

5/24/2017



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913379

Date: 08-Jun-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	- .9 mils). Job: 21073	PO: PO36166	Line: 21
5 ea	Part: 647.1714 Plate Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21075	PO: PO36166	Rev: E Line: 23
6 ea	Part: 647.7612 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 21076	PO: PO36166	Rev: NC Line: 24
6 ea	Part: 647.7813 Center Plate Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21077	PO: PO36166	Rev: A Line: 25
5 ea	Part: 647.7814 Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21078	PO: PO36166	Rev: A Line: 26
6 ea	Part: 647.7817 Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 Made in Canada.		Rev: A



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913379

Date: 08-Jun-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	- .9 mils). Job: 21079	PO: PO36166	Line: 27
65 ea	Part: 646.3715 Strut Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21108	PO: PO36166	Rev: A Line: 29
10 ea	Part: 646.3812 Gusset Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 21110	PO: PO36166	Rev: NC Line: 32
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>08/06/2017</u> Certified Signature: <u>[Signature]</u> Receiver Signature: <u>8017-6-8</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. Made in Canada.			